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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,057	01/12/2004	John M. Brookfield	D/A3312	1720

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EXAMINER

FIDLER, SHELBY LEE

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/756,057

Applicant(s)

BROOKFIELD ET AL.

Examiner

Shelby Fidler

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-8 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3 and 5-8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4, 5, 8, and 9 of copending Application No. 10756587. Although the conflicting claims are not identical, they are not patentably distinct from each other, as shown in the following table.

<i>Current Application # 10756057</i>	<i>Co-pending Application # 10756587</i>
Claim 1 - A drop emitting device comprising: an array of finger manifolds, each finger manifold having longitudinally separated first and second ends, wherein the first end comprises a fluid receiving end; a plurality of drop generators, each fluidically coupled to one of the finger manifolds; and a respective vent structure fluidically coupled to each of the finger manifolds for damping pressure perturbations in such finger manifold.	Claim 1 - A drop emitting device comprising: an array of finger manifolds, each finger manifold having longitudinally separated first and second ends, wherein the first end comprises a fluid receiving end; a plurality of drop generators, each fluidically coupled to one of the finger manifolds; and a respective vent structure located at the respective second end of each of the finger manifolds for supporting a plurality of menisciuses. (note that it is inherent that the vent structure is fluidically coupled to the finger manifold, since it is supporting menisci)
Claim 2 - The drop emitting device of claim 1, wherein the vent structure comprises a plurality of apertures.	Claim 1 - A drop emitting device comprising: an array of finger manifolds, each finger manifold having longitudinally separated first and second ends, wherein the first end

	<p>comprises a fluid receiving end; a plurality of drop generators, each fluidically coupled to one of the finger manifolds; and a respective vent structure located at the respective second end of each of the finger manifolds for supporting a plurality of menisci.</p> <p>Claim 4 - The drop emitting device of claim 1, wherein each vent structure comprises a plurality of apertures.</p>
Claim 3 - The drop emitting device of claim 1, wherein the vent structure comprises a plurality of apertures disposed at the second end of each of the finger manifolds.	<p>Claim 1 - A drop emitting device comprising: an array of finger manifolds, each finger manifold having longitudinally separated first and second ends, wherein the first end comprises a fluid receiving end; a plurality of drop generators, each fluidically coupled to one of the finger manifolds; and a respective vent structure located at the respective second end of each of the finger manifolds for supporting a plurality of menisci.</p> <p>Claim 4 - The drop emitting device of claim 1, wherein each vent structure comprises a plurality of apertures.</p>
Claim 5 - The drop emitting device of claim 1, wherein the vent structure comprises a plurality of apertures, each having a diameter of at most about 60 microns.	<p>Claim 1 - A drop emitting device comprising: an array of finger manifolds, each finger manifold having longitudinally separated first and second ends, wherein the first end comprises a fluid receiving end; a plurality of drop generators, each fluidically coupled to one of the finger manifolds; and a respective vent structure located at the respective second end of each of the finger manifolds for supporting a plurality of menisci.</p> <p>Claim 5 - The drop emitting device of claim 1, wherein each vent structure comprises a plurality of apertures, each having a diameter of at most about 60 microns.</p>
Claim 6 - The drop emitting device of claim 1, wherein the finger manifolds receive melted solid ink.	<p>Claim 1 - A drop emitting device comprising: an array of finger manifolds, each finger manifold having longitudinally separated first and second ends, wherein the first end comprises a fluid receiving end; a plurality of</p>

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	<p>drop generators, each fluidically coupled to one of the finger manifolds; and a respective vent structure located at the respective second end of each of the finger manifolds for supporting a plurality of menisci.</p> <p>Claim 8 - The drop emitting device of claim 1, wherein the finger manifolds receive melted solid ink.</p>
<p>Claim 7 - The drop emitting device of claim 1, wherein the finger manifolds, drop generators, and vent structures are formed in a laminar stack of metal plates.</p>	<p>Claim 1 - A drop emitting device comprising: an array of finger manifolds, each finger manifold having longitudinally separated first and second ends, wherein the first end comprises a fluid receiving end; a plurality of drop generators, each fluidically coupled to one of the finger manifolds; and a respective vent structure located at the respective second end of each of the finger manifolds for supporting a plurality of menisci.</p> <p>Claim 9 - The drop emitting device of claim 1, wherein the finger manifolds, drop generators, and vent structures are formed in a laminar stack of metal plates.</p>
<p>Claim 8 - A drop emitting device comprising: an array of finger manifolds; a plurality of drop generators, each fluidically coupled to one of the finger manifolds; and respective mans fluidically coupled to each of the finger manifolds for increasing compliance in such finger manifold.</p>	<p>Claim 1 - A drop emitting device comprising: an array of finger manifolds, each finger manifold having longitudinally separated first and second ends, wherein the first end comprises a fluid receiving end; a plurality of drop generators, each fluidically coupled to one of the finger manifolds; and a respective vent structure located at the respective second end of each of the finger manifolds for supporting a plurality of menisci.</p> <p>Claim 2 - The drop emitting device of claim 1, wherein each vent structure reduces fluidic resistance in its associated finger manifold.</p>

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Komplin et al. (US 5940096).

With regards to claim 1, Komplin teaches a drop emitting device comprising:

an array of finger manifolds (*elements 26, Figure 1*), each finger manifold having longitudinally separated first and second ends (*ends are unreferenced, but terminate with elements 22 and 24 at the respective ends, Figure 1*), wherein the first end comprises a fluid receiving end (*end terminated with element 24, Figure 1*);

a plurality of drop generators (*col. 3, lines 20-22*), each fluidically coupled to one of the finger manifolds (*col. 3, lines 22-23*); and

a respective vent structure located at the respective second end of each of the finger manifolds (*elements 22, Figure 1*) for damping pressure perturbations in the finger manifolds (*Figure 4*).

With regards to claim 8, Komplin teaches a drop emitting device comprising:

an array of finger manifolds (*elements 26, Figure 1*);

a plurality of drop generators (*col. 3, lines 20-22*), each fluidically coupled to one of the finger manifolds (*col. 3, lines 22-23*); and

respective means for increasing compliance in the finger manifold () that are fluidically coupled to each of the manifolds (*element 22 in fluid communication with manifold 26, Figure 3*).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3423 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 6488355 B2) in view of Tachihara et al. (US 6280020 B1).

With regards to claim 1, Nakamura teaches a drop emitting device comprising:

an array of finger manifolds (*elements 5, Figure 2*), each finger manifold having longitudinally separated first and second ends (*unreferenced ends of elements 5, Figure 2*), wherein the first end comprises a fluid receiving end (*col. 7, lines 39-40*);

a plurality of drop generators (*elements 2 represent the drop generators, Figure 2*), each fluidically coupled to one of the finger manifolds (*col. 6, lines 64-67*).

Nakamura does not expressly teach of a vent structure at the second end of each of the finger manifolds. Tachihara teaches a vent structure located at the second end of each of the finger manifolds (*elements 13, Figure 5*) for damping pressure perturbations in the finger manifold (*col. 4, lines 56-59*).

With regards to claim 2, Tachihara teaches that the vent structure comprises a plurality of apertures (*elements 13, 13-1, and 13-2, Figure 5*).

With regards to claim 4, Tachihara teaches that the vent structure comprises a plurality of apertures disposed along a longitudinal extent of each of the finger manifolds (*elements 13-1 through 13-4, Figure 4*).

With regards to claim 5, Tachihara teaches that each vent structure has a diameter of at most about 60 microns (*col. 6, lines 22-23: the inscribed diameter of the vent structure has a maximum diameter of 54 μ m*).

With regards to claim 6, Tachihara teaches that the finger manifolds receive melted solid ink (*col. 14, lines 16-24*).

With regards to claim 7, Nakamura teaches that the finger manifolds and drop generators are formed in a laminar stack of metal plates (*ink chamber unit members, col. 8, lines 32-55*). Because Tachihara's vent structures are incorporated into the finger manifolds, these too would be formed in Nakamura's laminar stack of metal plates.

With regards to claim 8, Nakamura teaches a drop emitting device comprising:
an array of finger manifolds (*elements 5, Figure 2*); and
a plurality of drop generators (*elements 2 represent the drop generators, Figure 2*),
each fluidically coupled to one of the finger manifolds (*col. 6, lines 64-67*).

Nakamura does not expressly teach of a means for increasing compliance in the finger manifolds. Tachihara teaches:

a means for increasing compliance in the finger manifold (*col. 4, lines 56-59*) that is fluidically coupled to each of the finger manifolds (*element 13 is fluidically coupled to passage 14, Figure 2*).

Allowable Subject Matter

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

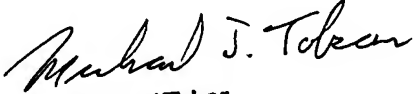
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The primary reason for indicating allowable subject matter in claim 3 is the inclusion of an array of finger manifolds, each finger manifold including a vent structure that comprises a plurality of apertures disposed at the opposite end from the fluid receiving end of the finger. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught, or suggested by the prior art of record which indicates allowable subject matter.

Conclusion

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SLF


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